

## 1 CLAIMS

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3 1. A piston rod assembly for coupling between a power end  
4 and a fluid end of a high pressure reciprocating pump,  
5 the assembly comprising one or more clamping members  
6 arranged relative to a rod axis between the power end  
7 and the fluid end, each member having a first end  
8 adapted to grip the power end component, and a second  
9 end adapted to grip the fluid end component, and at  
10 least one member including one or more tensioning  
11 means, wherein said tensioning means comprise a piston  
12 to provide a load in said tensioning means orthogonal  
13 to said rod axis and thereby secure said components  
14 against release.

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16 2. A piston rod assembly as claimed in Claim 1, wherein,  
17 the clamping members are part cylindrical bodies which  
18 when arranged on the rod axis provide a substantially  
19 cylindrical body.

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21 3. A piston rod assembly as claimed in Claim 1 or Claim 2  
22 wherein, there are two clamping members, an upper  
23 clamping member and a lower clamping member.

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25 4. A piston rod assembly as claimed in any preceding  
26 Claim wherein, the first and second ends include a  
27 contact face parallel to the rod axis on an inner  
28 surface.

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30 5. A piston rod assembly as claimed in Claim 4, wherein  
31 each face provides a recess on the inner surface in  
32 which a portion of the power end component or fluid  
33 end component is located such that the component is

1 gripped and held when the clamping members are brought  
2 together by the tensioning means.

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4 6. A piston rod assembly as claimed in any preceding  
5 Claim wherein each component end and the first/second  
6 end provide a knuckle joint.

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8 7. A piston rod assembly as claimed in any one of Claims  
9 1 to 5 wherein each component end and the first/second  
10 end provide a ball and socket.

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12 8. A piston rod assembly as claimed in any preceding  
13 Claim wherein each piston is slideable within an  
14 hydraulic cylinder.

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16 9. A piston rod assembly as claimed in any preceding  
17 Claim wherein each piston includes at least one stem  
18 adapted to receive a nut or a lock.

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20 10. A piston rod assembly as claimed in Claim 9 wherein  
21 each stem extends from one clamping member through an  
22 aperture in an adjacent clamping member, and wherein a  
23 nut engages the stem to couple the clamping members.

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25 11. A piston rod assembly as claimed in Claim 9 or Claim  
26 10 wherein a spring is arranged within the hydraulic  
27 cylinder to tension the said stem.

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29 12. A piston rod assembly as claimed in any one of Claims  
30 9 to 11 wherein the assembly includes non-rotational  
31 means for preventing rotation of said stem.

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1 13. A piston rod assembly as claimed in Claim 12 wherein  
2 the non-rotational means is a pin locating in a  
3 matching recess arranged parallel to the stem.  
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5 14. A piston rod assembly as claimed in any one of Claims  
6 8 to 13 wherein a space is defined between a base of  
7 the cylinder and a base of the piston for  
8 accommodating hydraulic fluid.  
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10 15. A piston rod assembly as claimed in any one of Claims  
11 8 to 14 wherein the assembly includes a fluid inlet  
12 port to permit the input of hydraulic fluid to the  
13 cylinder.  
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15 16. A piston rod assembly as claimed in Claim 15 wherein  
16 a chamber is included in the/each member to provide a  
17 common feed for hydraulic fluid to all cylinders  
18 within the member.  
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